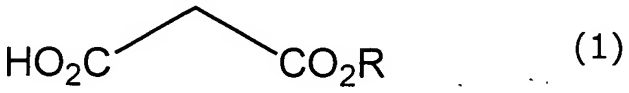
AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A compound represented by formula (1) or a salt thereof:



(1)

wherein R represents ~~a group that is easily removable upon hydrolysis in vivo.~~

(a) C1-C6 alkylcarbonyloxy C1-C6 alkyl,

(b) arylcarbonyloxy C1-C6 alkyl,

(c) five- to seven-membered heterocyclic carbonyloxy C1-C6 alkyl,

(d) C2-C6 alkenylcarbonyloxy C1-C6 alkyl,

(e) C2-C6 alkynylcarbonyloxy C1-C6 alkyl,

(f) C3-C8 cycloalkylcarbonyloxy C1-C6 alkyl,

(g) C1-C6 alkoxycarbonyloxy C1-C6 alkyl,

(h) aryloxycarbonyloxy C1-C6 alkyl,

(i) five- to seven-membered heterocyclic oxycarbonyloxy C1-C6 alkyl,

(j) C2-C6 alkenyloxycarbonyloxy C1-C6 alkyl,

(k) C2-C6 alkynyloxycarbonyloxy C1-C6 alkyl,

(l) C3-C8 cycloalkyloxycarbonyloxy C1-C6 alkyl,

(m) phthalid-3-yl, or

(n) 2-oxo-5-(C1-C6 alkyl)-1,3-dioxolen-4-ylmethyl,

wherein groups (a) to (n) are optionally substituted by a substituent selected from the group consisting of:

C1-C6 alkyl; C3-C8 cycloalkyl; C1-C6 alkoxy; C2-C6 alkenyl; C2-C6 alkynyl; aryl optionally substituted by C1-C6 alkyl; five- to seven-membered heterocyclic group; C1-C6 alkylcarbonyloxy; C1-C6 alkoxycarbonyloxy; arylcarbonyloxy; aryloxycarbonyloxy; C1-C6 alkylthio; C2-C6 alkenylthio; and di-C1-C6 alkylamino, and

said aryl represents phenyl or naphthyl.

2. **(Currently Amended)** The compound according to claim 1, wherein R ~~represents~~is selected from groups: (a), (b), (d), (f) to (h), (j), and (l) to (n).

~~(a) C1-C6 alkylcarbonyloxy C1-C6 alkyl,~~

~~(b) arylcarbonyloxy C1-C6 alkyl,~~

~~(c) five- to seven-membered heterocyclic carbonyloxy C1-C6 alkyl,~~

~~(d) C2-C6 alkenylcarbonyloxy C1-C6 alkyl,~~

~~(e) C2-C6 alkynylcarbonyloxy C1-C6 alkyl,~~

~~(f) C3-C8 cycloalkylcarbonyloxy C1-C6 alkyl,~~

~~(g) C1-C6 alkoxycarbonyloxy C1-C6 alkyl,~~

~~(h) aryloxycarbonyloxy C1-C6 alkyl,~~

~~(i) five- to seven-membered heterocyclic oxycarbonyloxy C1-C6 alkyl,~~

~~(j) C2-C6 alkenyloxycarbonyloxy C1-C6 alkyl,~~

~~(k) C2-C6 alkynyloxycarbonyloxy C1-C6 alkyl,~~

~~(l) C3-C8 cycloalkyloxycarbonyloxy C1-C6 alkyl,~~

~~(m) phthalid-3-yl, or~~

~~(n) 2-oxo-5-(C1-C6 alkyl)-1,3-dioxolen-4-ylmethyl,~~

~~wherein groups (a) to (n) are optionally substituted by a substituent selected from the group consisting of:~~

~~C1-C6 alkyl; C3-C8 cycloalkyl; C1-C6 alkoxy; C2-C6 alkenyl; C2-C6 alkynyl; aryl optionally substituted by C1-C6 alkyl; five- to seven-membered heterocyclic group; C1-C6 alkylcarbonyloxy; C1-C6 alkoxycarbonyloxy; arylcarbonyloxy; aryloxycarbonyloxy; C1C6 alkylthio; C2-C6 alkenylthio; and di-C1-C6 alkylamino, and~~

~~said aryl represents phenyl or naphthyl.~~

3. **(Withdrawn)** The compound according to claim 2, wherein the substituent in R is selected from the group consisting of C1-C6 alkyl, C3-C8 cycloalkyl, C1-C6 alkoxy, C2-C6 alkenyl, C2-C6 alkynyl, aryl, and five- to seven-membered heterocyclic group.

4. **(Withdrawn)** The compound according to claim 2, wherein the substituent in R represents C1-C4 alkyl or C3-C6 cycloalkyl.

5. **(Original)** The compound according to claim 2, wherein R represents

(a') C1-C6 alkylcarbonyloxy C1-C6 alkyl optionally substituted by C3-C8 cycloalkyl; or by aryl optionally substituted by C1-C6 alkyl,

(b') arylcarbonyloxy C1-C6 alkyl in which the aryl part is optionally substituted by C1-C6 alkyl,

(d') unsubstituted C2-C6 alkenylcarbonyloxy C1-C6 alkyl,

(f') unsubstituted C3-C8 cycloalkylcarbonyloxy C1-C6 alkyl,

(g') C1-C6 alkoxycarbonyloxy C1-C6 alkyl optionally substituted by C3-C8 cycloalkyl; or by aryl optionally substituted by C1-C6 alkyl,

(h') aryloxycarbonyloxy C1-C6 alkyl in which the aryl part is optionally substituted by C1-C6 alkyl,

(j') unsubstituted C2-C6 alkenyloxycarbonyloxy C1-C6 alkyl,

(l') unsubstituted C3-C8 cycloalkyloxycarbonyloxy C1-C6 alkyl,

(m') unsubstituted phthalid-3-yl, or

(n') unsubstituted 2-oxo-5-(C1-C6 alkyl)-1,3-dioxolen-4-ylmethyl.

6. **(Original)** The compound according to claim 2, wherein R represents

(a") C1-C6 alkylcarbonyloxy C1-C2 alkyl optionally substituted by cyclohexyl,

(b") phenylcarbonyloxy C1-C2 alkyl in which the phenyl part is optionally substituted by C1-C4 alkyl,

(g") C1-C6 alkoxycarbonyloxy C1-C2 alkyl optionally substituted by cyclohexyl,

(h") phenyloxycarbonyloxy C1-C2 alkyl in which the phenyl part is optionally substituted by C1-C4 alkyl,

(l") unsubstituted C3-C6 cycloalkyloxycarbonyloxy C1-C2 alkyl, or

(n") unsubstituted 2-oxo-5-(C1-C4 alkyl)-1,3-dioxolen-4-ylmethyl.

7. **(Original)** The compound according to claim 1, which is selected from the following group of compounds:

monoacetyloxymethyl malonate,

monopivaloyloxymethyl malonate,

mono-2,4-dimethylbenzoyloxymethyl malonate,

mono-1-(ethoxycarbonyloxy)ethyl malonate,

mono-1-(isopropoxycarbonyloxy)ethyl malonate,

monocyclohexyloxycarbonyloxymethyl malonate,

mono-1-(cyclohexyloxycarbonyloxy)ethyl malonate,

mono-1-(phenoxycarbonyloxy)ethyl malonate,

mono-2-oxo-5-methyl-1,3-dioxolen-4-ylmethyl malonate,

mono-1-(2,2-dimethylpropoxycarbonyloxy)ethyl malonate,

mono-1-(2-cyclohexylethoxycarbonyloxy)ethyl malonate,

mono-1-(isobutoxycarbonyloxy)ethyl malonate,

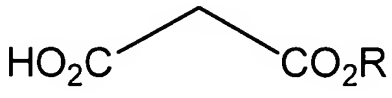
monoisopropoxycarbonyloxymethyl malonate,

monoisopentoxycarbonyloxymethyl malonate,

monoisobutylcarbonyloxymethyl malonate, and

mono-1-ethylpropylcarbonyloxymethyl malonate.

8. **(Withdrawn)** A process for producing a compound represented by formula (1) or a salt thereof:



(1)

said process comprising the step of reacting malonic acid with a compound represented by formula (2) in the presence of a base:

RX (2)

wherein

R represents a group that, in the form of an ester group -COOR, can be degraded and is easily removable in vivo; and

X represents a halogen atom.

9. **(Withdrawn)** The process according to claim 8, wherein R represents

(a) C1-C6 alkylcarbonyloxy C1-C6 alkyl,

(b) arylcarbonyloxy C1-C6 alkyl,

(c) five- to seven-membered heterocyclic carbonyloxy C1-C6 alkyl,

(d) C2-C6 alkenylcarbonyloxy C1-C6 alkyl,

(e) C2-C6 alkynylcarbonyloxy C1-C6 alkyl,

(f) C3-C8 cycloalkylcarbonyloxy C1-C6 alkyl,

(g) C1-C6 alkoxycarbonyloxy C1-C6 alkyl,

(h) aryloxycarbonyloxy C1-C6 alkyl,

(i) five- to seven-membered heterocyclic oxycarbonyloxy C1-C6 alkyl,

(j) C2-C6 alkenyloxycarbonyloxy C1-C6 alkyl,

(k) C2-C6 alkynyloxycarbonyloxy C1-C6 alkyl,

(l) C3-C8 cycloalkyloxycarbonyloxy C1-C6 alkyl,

(m) phthalid-3-yl, or

(n) 2-oxo-5-(C1-C6 alkyl)-1,3-dioxolen-4-ylmethyl,

wherein groups (a) to (n) are optionally substituted by a substituent selected from the group consisting of:

C1-C6 alkyl; C3-C8 cycloalkyl; C1-C6 alkoxy; C2-C6 alkenyl; C2-C6 alkynyl; aryl optionally substituted by C1-C6 alkyl; five- to seven-membered heterocyclic group; C1-C6 alkylcarbonyloxy; C1-C6 alkoxycarbonyloxy; arylcarbonyloxy; aryloxycarbonyloxy; C1-C6 alkylthio; C2-C6 alkenylthio; and di-C1-C6 alkylamino, and

said aryl represents phenyl or naphthyl.

10. **(Withdrawn)** The process according to claim 9, wherein R represents

(a') C1-C6 alkylcarbonyloxy C1-C6 alkyl optionally substituted by C3-C8 cycloalkyl; or by aryl optionally substituted by C1-C6 alkyl,

(b') arylcarbonyloxy C1-C6 alkyl in which the aryl part is optionally substituted by C1-C6 alkyl,

(d') unsubstituted C2-C6 alkenylcarbonyloxy C1-C6 alkyl,

(f') unsubstituted C3-C8 cycloalkylcarbonyloxy C1-C6 alkyl,

(g') C1-C6 alkoxycarbonyloxy C1-C6 alkyl optionally substituted by C3-C8 cycloalkyl; or by aryl optionally substituted by C1-C6 alkyl,

(h') aryloxycarbonyloxy C1-C6 alkyl in which the aryl part is optionally substituted by C1-C6 alkyl,

(j') unsubstituted C2-C6 alkenyloxycarbonyloxy C1-C6 alkyl,

(l') unsubstituted C3-C8 cycloalkyloxycarbonyloxy C1-C6 alkyl,

(m') unsubstituted phthalid-3-yl, or

(n') unsubstituted 2-oxo-5-(C1-C6 alkyl)-1,3-dioxolen-4-ylmethyl.

11. **(Withdrawn)** The process according to claim 9, wherein R represents

(a") C1-C6 alkylcarbonyloxy C1-C2 alkyl optionally substituted by cyclohexyl,

(b") phenylcarbonyloxy C1-C2 alkyl in which the phenyl part is optionally substituted by C1-C4 alkyl,

(g") C1-C6 alkoxycarbonyloxy C1-C2 alkyl optionally substituted by cyclohexyl,

(h") phenyloxycarbonyloxy C1-C2 alkyl in which the phenyl part is optionally substituted by C1-C4 alkyl,

(l") unsubstituted C3-C6 cycloalkyloxycarbonyloxy C1-C2 alkyl, or

(n") unsubstituted 2-oxo-5-(C1-C4 alkyl)-1,3-dioxolen-4-ylmethyl.

12. **(Withdrawn)** The process according to claim 8, wherein the compound

represented by formula (1) is selected from the following group of compounds:

monoacetyloxymethyl malonate,

monopivaloyloxymethyl malonate,

mono-2,4-dimethylbenzoyloxymethyl malonate,

mono-1-(ethoxycarbonyloxy)ethyl malonate,

mono-1-(isopropoxycarbonyloxy)ethyl malonate,

monocyclohexyloxycarbonyloxymethyl malonate,

mono-1-(cyclohexyloxycarbonyloxy)ethyl malonate,

mono-1-(phenoxycarbonyloxy)ethyl malonate,

mono-2-oxo-5-methyl-1,3-dioxolen-4-ylmethyl malonate,

mono-1-(2,2-dimethylpropoxycarbonyloxy)ethyl malonate,

mono-1-(2-cyclohexylethoxycarbonyloxy)ethyl malonate,

mono-1-(isobutoxycarbonyloxy)ethyl malonate,

monoisopropoxycarbonyloxymethyl malonate,

monoisopentoxycarbonyloxymethyl malonate,

monoisobutylcarbonyloxymethyl malonate, and

mono-1-ethylpropylcarbonyloxymethyl malonate.

13. **(Withdrawn)** The process according to claim 8, wherein said base is triethylamine, N,N-diisopropylethylamine, or 2,6-lutidine.

14. **(Withdrawn)** The process according to claim 8, wherein said reaction is carried out in an aprotic polar solvent.

15. **(Withdrawn)** The process according to claim 14, wherein said aprotic polar solvent is tetrahydrofuran or acetonitrile.

16. **(Withdrawn)** The process according to claim 8, wherein, in the reaction, a

compound represented by formula (3) is further added:

$R^1R^2R^3R^4N^+X^-$ (3)

wherein

X^- represents a halide ion; and

R^1 to R^4, which may be the same or different, represent

C1-C6 alkyl which may combine with any of R^1 to R^4 to form a ring,

aryl optionally substituted by C1-C6 alkyl,

aryl C1-C6 alkyl in which the aryl part is optionally substituted by C1-C6 alkyl,

C3-C8 cycloalkyl C1-C6 alkyl,

C3-C8 cycloalkyl,

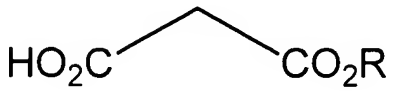
C2-C6 alkenyl, or

C2-C6 alkynyl.

17. **(Withdrawn)** The process according to claim 16, wherein the compound represented by formula (3) is tetra-n-butylammonium chloride, N,N-diethylpiperidinium chloride, or benzyltriethylammonium chloride.

18. **(Withdrawn)** A process for producing a prodrug compound having an ester group -COOR as at least one of substituents,

said process comprising the step of introducing a -COOR group into a precursor compound of said prodrug compound using a compound represented by formula (1) or a salt thereof:



(1)

wherein R represents a group that is easily removable upon hydrolysis in vivo.

19. **(Withdrawn)** The process according to claim 18, wherein the -COOR group is introduced into the precursor compound by reacting

a magnesium malonate represented by formula (4)

$Mg(O_2CCH_2CO_2R)_2$ (4)

wherein R represents a group that is easily removable upon hydrolysis in vivo, obtained by reacting the compound represented by formula (1) or a salt thereof with a magnesium salt in an organic solvent

with the precursor compound of said prodrug compound.

20. **(Withdrawn)** The process according to claim 18, wherein said prodrug compound is a prodrug of an antibacterial carbapenem compound which can be administered orally.

21. **(Withdrawn)** The process according to claim 18, wherein R represents

(a) C1-C6 alkylcarbonyloxy C1-C6 alkyl,

(b) arylcarbonyloxy C1-C6 alkyl,

(c) five- to seven-membered heterocyclic carbonyloxy C1-C6 alkyl,

(d) C2-C6 alkenylcarbonyloxy C1-C6 alkyl,

(e) C2-C6 alkynylcarbonyloxy C1-C6 alkyl,

(f) C3-C8 cycloalkylcarbonyloxy C1-C6 alkyl,

(g) C1-C6 alkoxycarbonyloxy C1-C6 alkyl,

(h) aryloxycarbonyloxy C1-C6 alkyl,

(i) five- to seven-membered heterocyclic oxycarbonyloxy C1-C6 alkyl,

(j) C2-C6 alkenyloxycarbonyloxy C1-C6 alkyl,

(k) C2-C6 alkynyloxycarbonyloxy C1-C6 alkyl,

(l) C3-C8 cycloalkyloxycarbonyloxy C1-C6 alkyl,

(m) phthalid-3-yl, or

(n) 2-oxo-5-(C1-C6 alkyl)-1,3-dioxolen-4-ylmethyl,

wherein groups (a) to (n) are optionally substituted by a substituent selected from the group consisting of:

C1-C6 alkyl; C3-C8 cycloalkyl; C1-C6 alkoxy; C2-C6 alkenyl; C2-C6 alkynyl; aryl optionally substituted by C1-C6 alkyl; five- to seven-membered heterocyclic group; C1-C6 alkylcarbonyloxy; C1-C6 alkoxycarbonyloxy; arylcarbonyloxy; aryloxycarbonyloxy; C1-C6 alkylthio; C2-C6 alkenylthio; and di-C1-C6 alkylamino, and

said aryl represents phenyl or naphthyl.

22. **(Withdrawn)** The process according to claim 21, wherein R represents

(a") C1-C6 alkylcarbonyloxy C1-C2 alkyl optionally substituted by cyclohexyl,

(b") phenylcarbonyloxy C1-C2 alkyl in which the phenyl part is optionally substituted by C1-C4 alkyl,

(g") C1-C6 alkoxycarbonyloxy C1-C2 alkyl optionally substituted by cyclohexyl,

(h") phenyloxycarbonyloxy C1-C2 alkyl in which the phenyl part is optionally substituted by C1-C4 alkyl,

(l") unsubstituted C3-C6 cycloalkyloxycarbonyloxy C1-C2 alkyl, or

(n") unsubstituted 2-oxo-5-(C1-C4 alkyl)-1,3-dioxolen-4-ylmethyl.

23. **(Withdrawn)** The process according to claim 18, wherein the compound represented by formula (1) is selected from the following group of compounds:

monoacetyloxymethyl malonate,

monopivaloyloxymethyl malonate,

mono-2,4-dimethylbenzoyloxymethyl malonate,

mono-1-(ethoxycarbonyloxy)ethyl malonate,

mono-1-(isopropoxycarbonyloxy)ethyl malonate,

monocyclohexyloxycarbonyloxymethyl malonate,

mono-1-(cyclohexyloxycarbonyloxy)ethyl malonate,

mono-1-(phenoxycarbonyloxy)ethyl malonate,

mono-2-oxo-5-methyl-1,3-dioxolen-4-ylmethyl malonate,
mono-1-(2,2-dimethylpropoxycarbonyloxy)ethyl malonate,
mono-1-(2-cyclohexylethoxycarbonyloxy)ethyl malonate,
mono-1-(isobutoxycarbonyloxy)ethyl malonate,
monoisopropoxycarbonyloxymethyl malonate,
monoisopentoxycarbonyloxymethyl malonate,
monoisobutylcarbonyloxymethyl malonate, and
mono-1-ethylpropylcarbonyloxymethyl malonate.